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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/006,777	01/14/1998	CHRIS L. HOOGENBOOM	100-010	4131

35114 7590 06/20/2003

ALCATEL INTERNETWORKING SYSTEM, INC.
ALCATEL-INTELLECTUAL PROPERTY DEPARTMENT
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EXAMINER
KWOH, JASPER C

ART UNIT	PAPER NUMBER
2663	

DATE MAILED: 06/20/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)
	09/006,777	HOOGENBOOM ET AL.
	Examiner	Art Unit
	Jasper Kwoh	2663

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *21 March 2003* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-5,7-16 and 18-54* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☒ Claim(s) *23-32* is/are allowed.

6)☒ Claim(s) *1-5,7-16,18-22 and 33-54* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____ .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Claim Rejections - 35 USC § 103

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

2. Claims 1-5, 7-16, 18-22 and 33-54 are rejected under 35 U.S.C. 103(a) as being unpatentable over Osaki et al. in view of Heiss.

Regarding claims 1, 10, 33 and 42, Osaki discloses an ATM switch comprising: a plurality of input ports (i.e. fig. 4, 55, DATA PATH shows the input port for the switch, it is inherent that there are more than one input port for the switch); a plurality of output ports, each associated with a data store and an output control (i.e. fig. 4, 58, 50; output from the switch is stored in a buffer and the information is processed, it is inherent that a switch has a plurality of outputs); a switch fabric (i.e. fig. 4, 55; it is equivalent to a packet switch); and a rate filter (i.e. fig. 4, 50, discarding module determines whether the data units will be filtered), wherein the data stores are arranged to buffer data units for delivery (i.e. fig. 4, 58) and monitors backlog if backlog reaches a particular level, to enforce a rate limitation against additional data units for delivery to their output ports, wherein the additional data units in violation of the rate limitation are filtered by the rate filter do they are not stored in the data stores (i.e. col. 6, ll. 43-65; when packets stored exceed the prescribed value, packets will be discarded so the rate will be closest to the predetermined value. Osaki does not specifically disclose segregating the data unit for storage in the data stored based on their designated priorities, and output control monitors two or more of the data stores. However, Heiss teaches that data units are

segregated into different buffers according to priority (i.e. fig. 1, cells are buffered in CBR-QU, ABR-QU or VBR0QU according to the cell's priority rate) and the output control monitors all the buffers (i.e. fig. 1, OC, col. 6, ll. 20-25). Therefore, it would have been obvious to an ordinary person skilled in the art at the time of the invention to include an output control and segregating data units according to priorities of a handling system as taught by Heiss with the switch of Osaki. The motivation is to have a circuit arrangement that is of relatively low circuit-oriented expense in order to implement the message cells supplied to this circuit arrangement upon retention of the characteristic parameters determined for the individual virtual circuit connections.

Regarding claims 2-4, 13-15, 21, 34-36, 45-47 and 53, Osaki does not specifically disclose high priorities units are not in violation while low priorities are in violation based on a leaky bucket algorithm. However, Heiss teaches that packets will be dropped according to priorities using leaky bucket algorithm (i.e. col. 6, ll. 44-45, LBM will discard depending CLP; some cells have high cell loss priority while others have low cell loss priority, CLP=1,0). Therefore, it would have been obvious to an ordinary person skilled in the art at the time of the invention to include loss priorities to determine which packets will be dropped as taught by Heiss with the switch of Osaki in order to improve the performance of the network.

Regarding claims 5, 16, 37, and 48, backlog falls below a particular level, output controls are arranged to lift the rate limitation (i.e. it is inherent that once there is no backlog, no packets need to be discarded)

Regarding claims 7, 18, 39 and 50, Osaki discloses data stored are physically associated with the output ports (i.e. fig. 4, 58 is directly connected to 5).

Regarding claims 8, 19, 22, 40, 49, 51 and 54 Osaki does not specifically disclose that the buffer is located at the input so that the discarding occurs at the input. However, official notice is taken that it is notoriously well known that buffering can occur at the input and discarding can occur there. Therefore, it would have been obvious to an ordinary person skilled in the art at the time of the invention to include locating the buffer and enforcing the violation of the switch of Osaki in view of Heiss at the input in order to prevent packets that would be discarded anyway from causing congestion in the switch.

Regarding claims 9, 20, 41, and 52, rate limitation is enforced at the output (i.e. fig. 4, 50, discarding is at the output buffer).

Regarding claims 11-12, 38, 43-44, Osaki discloses output store has input port combination (i.e. fig. 4, output to 5 is in combination with input from 1) but does not specifically disclose output data stores having distinct priorities. However, Heiss teaches that data units are segregated into different buffers according to priority (i.e. fig. 1, cells are buffered in CBR-QU, ABR-QU or VBR-QU according to the cell's priority rate) and the output control monitors all the buffers (i.e. fig. 1, OC, col. 6, ll. 20-25). Therefore, it would have been obvious to an ordinary person skilled in the art at the time of the invention to include an output control and segregating data units according to priorities of a handling system as taught by Heiss with the switch of Osaki. The motivation is to have a circuit arrangement that is of relatively low circuit-oriented

expense in order to implement the message cells supplied to this circuit arrangement upon retention of the characteristic parameters determined for the individual virtual circuit connections.

Allowable Subject Matter

3. Claims 23-32 are allowed.

Response to Arguments

4. Applicant's arguments with respect to claims 1-5, 7-16,18-22, 33-54 has been considered but are moot in view of the new ground(s) of rejection.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jasper Kwoh whose telephone number is (703) 305-0101. The examiner can normally be reached on Monday-Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chau Nguyen can be reached on (703)308-5340. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9314.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703)305-4700.

Jasper Kwoh
Examiner
Art Unit 2663

JK
June 16, 2003

CHAU NGUYEN
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2600